

**ACT HEALTH PROTECTION SERVICE**

**MICROBIOLOGICAL**

**QUALITY OF**

**LOGLIFE REFRIGERATED**

**PRODUCTS**

March 2003 – June 2003

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## OBJECTIVE

- To establish the prevalence of *L. monocytogenes* and *Salmonella sp* in a variety of Packaged Long Shelf Life Refrigerated Foods (PLSLRF)
- To test the compliance of these products to Food Standards Australia New Zealand (FSANZ) Draft Guidelines for the Microbiological Examination of Ready-to-Eat Foods

## BACKGROUND

Packaged long shelf life refrigerated foods are becoming more common on ACT delicatessen and supermarket shelves, they include items such as salami, sliced meats, soft cheeses and smoked fish. Many of these food products are sold 'ready-to-eat' and are considered at high risk of bacterial contamination. Of particular concern in this type of product is *L. monocytogenes*, which is capable of replication at refrigeration temperatures<sup>1</sup> and possibly of reaching high numbers in the food. Food Safety Victoria was sufficiently concerned about this problem that they produced a guide for Environmental Health officers for the testing of *L. monocytogenes* in ready to eat food<sup>2</sup>. The other major pathogen of concern in this type of product is *Salmonella sp* as they are also capable of extended survival at refrigeration temperatures and many strains will grow at 7°C<sup>3</sup>.

A number of these products have been tested previously, as part of Cheese, Smallgoods and Ready to Eat surveys without significant findings. The Health Protection Service Sampling Working Group (HPSSWG) decided that, due to the high-risk nature of the product it would be desirable to conduct a survey dedicated to this product type.

## STANDARDS

The HPSSWG decided that it would be wise to test these foods against the FSANZ Draft Microbiological Guidelines for Ready-to-Eat Foods as the FSANZ Food Standards Code (FSC) does not include microbiological standards for this type of product, see Table 1.

**Table 1. Testing Criteria and levels**

Test	Microbiological Quality (CFU per gram)			
	Satisfactory	Marginal	Unsatisfactory	Potentially Hazardous
<i>Salmonella sp.</i>	Not detected in 25g			Detected in 25g
<i>Listeria monocytogenes</i>	Not detected in 25g	Detected but <10 <sup>2</sup> *		≥10 <sup>2</sup> #

### NOTE :

\* Foods with a long shelf life stored under refrigeration should have no *L. monocytogenes* detected in 25g.

# The detection of *L. monocytogenes* in ready-to-eat foods prepared specifically for "at risk" population groups (the elderly, immuno-compromised and infants) should also be considered as potentially hazardous.

## SURVEY

The survey was conducted between 05 March and 25 June 2003. During this period a total of 86 samples were collected by the Microbiology Unit staff as 'customer samples' and processed by the Microbiology Unit of Australian Capital Territory Government Analytical Laboratory (ACTGAL). The samples were collected weekly on seventeen occasions from one of five different large ACT retail outlets. Samples included salami, soft cheeses and smoked fish.

## RESULTS

**Table 2 Results of Pathogen testing**

Organism	No. of samples positive
<i>Salmonella</i> spp. (n=89)	NIL
<i>Listeria monocytogenes</i> (n=89)	NIL

## DISCUSSION

Neither *Salmonella* sp. nor *Listeria monocytogenes* were isolated from any of the samples in this study.

## CONCLUSION

The quality of Packaged Long Shelf Life Refrigerated Foods sold in the ACT is appears to be satisfactory.

## BIBLIOGRAPHY

1. *Listeria monocytogenes*. Sutherland PS, Miles DW, Laboyrie DA in Foodborne Microorganisms of Public Health Significance, Sixth edition 2003, AIFST
2. *Listeria monocytogenes* in ready to eat food, A Guide for Environmental Health Officers Food Safe Victoria . [www.foodsafe.vic.gov.au](http://www.foodsafe.vic.gov.au)
3. *Salmonella*. Jay LS, Davos D, Dundas M, Frankish and Lightfoot D. in Foodborne Microorganisms of Public Health Significance, Sixth edition 2003, AIFST
4. FSANZ Interpretive Guidelines for the Microbiological Examination of Ready to Eat Foods